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BR Circuit Breakers

Contents

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Product Description

Plug-On Branch Feeder Type Arc Fault Circuit Breakers, Type BR—10 kAIC, 120 Vac and 120/240 Vac

A branch feeder type arc fault circuit interrupter is a device intended to mitigate high current arcing faults in the complete circuit, including connected cords. High current arcing faults can occur from line to neutral or line to ground. These arcing faults are in parallel with the load and produce the most energy of all arcing faults.

The branch feeder type AFCI is required in the 1999 and 2002 National Electrical Code.

The Combination Type AFCI is required in the 2005, 2008, and 2011 National Electrical Code.

Plug-On Combination Type Arc Fault Circuit Breakers, Type BR—10 kAIC, 120 Vac and 120/240 Vac

A combination type arc fault circuit interrupter is a device that includes all of the protection offered by the branch feeder AFCI (mitigation of high current arcing faults in the complete circuit, including connected cords). In addition it provides direct detection of persistent low current arcing faults down to 5 amps with associated mitigation of fire hazards in the cords connected to the outlets. High current arcing faults can occur from line to neutral or line to ground. These arcing faults are in parallel with the load and produce the most energy of all arcing faults. The current level of low current arcing faults is limited by the load.

Plug-On Ground Fault Circuit Breakers, Type GFTCB and GFEP—10/22 kAIC, 120 Vac and 120/240 Vac

Ground Fault Application Notes

Single-pole GFTCBs are designed for use in two-wire, 120 Vac circuits. See **Page V1-T1-87** for a typical wiring configuration.

Two-pole GFTCBs are designed for use in three-wire, 120/240 Vac circuits, 120 Vac multiwire circuits employing common, neutral and two-wire, 240 Vac circuits obtained from a 120/240 Vac source.

Page V1-T1-87 shows typical wiring configurations for a 120/240 Vac multiwire circuits, and a 240 Vac, two-wire circuit. Note the "panel neutral" conductor connects to the neutral bar, even though the neutral is not included in the load circuit. This connection is necessary to supply a 120 Vac power source to the ground fault sensing circuit.

The figures are shown with a 120/240 Vac, single-phase, three-wire power source, but are also applicable to a 120/208 Vac, three-phase, four-wire power supply. For all figures, the electrical operation of the GFTCB is not affected by the equipment ground.

Non-CTL Plug-On Replacement—Circuit Breakers, Type BRD—10 kAIC, 120/240 Vac

Non-CTL 10 kAIC for Replacement Purposes Only

For replacement in enclosures manufactured prior to 1968 with unnotched stabs. Circuit breakers do not have rejection tab.

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BR Breakers

Type BR Breakers, 1-Inch (25.4 mm) per Pole 240 Vac, 10, 22 and 42 kAIC

Three-Pole 240 Vac
Common Trip Requires Three
1-Inch (25.4 mm) Spaces
5 per Shelf Carton

Ampere Rating	Wire Size Range Cu/Al 60 °C or 75 °C	10 kAIC Catalog Number	22 kAIC Catalog Number
10	#14–4	**BR310**	—
15	#14–4	**BR315** ①	**BRH315**
20	#14–4	**BR320** ①	**BRH320**
25	#14–4	**BR325**	**BRH325**
30	#14–4	**BR330**	**BRH330**
35	#14–4	**BR335**	**BRH335**
40	#14–4	**BR340**	**BRH340**
45	#14–4	**BR345**	**BRH345**
50	#14–4	**BR350**	**BRH350**
55	#14–3	**BR355**	**BRH355**
60	#4–1/0	**BR360**	**BRH360**
70	#4–1/0	**BR370**	**BRH370**
80	#4–1/0	**BR380**	**BRH380**
90	#4–1/0	**BR390**	**BRH390**
100	#4–1/0	**BR3100**	**BRH3100**

Plug-On Branch Feeder Type Arc Fault Circuit Breakers, Type BR—10 kAIC, 120 Vac and 120/240 Vac

Type BR AFCI Circuit Breaker

Type BR, 1-Inch (25.4 mm) Wide FIRE-GUARD AFCI Circuit Breakers

Poles	Ampere Rating	Configuration	Catalog Number
Single-pole 10 kAIC	15	AFCI	**BR115AF** ②
	20	AFCI	**BR120AF** ②
Single-pole 22 kAIC	15	AFCI	**BRH115AF**
	20	AFCI	**BRH120AF**
Two-pole 10 kAIC ③④	15	AFCI Common Trip	**BRL215AF**
	20	AFCI Common Trip	**BRL220AF**

Notes

① One pole, 1-inch (25.4 mm) per pole circuit breakers are available with high magnetic setting for switching large tungsten lamp loads. Add suffix H to catalog number.
② Clamshell packaging available with CS modification code on the end of catalog number.
③ Common trip refers to two-pole 240 V load application sourced by 120/240 Vac (see **Page V1-T1-87**).
④ Independent trip refers to two-pole multi-wire, home run or shared neutral circuits (see **Pages V1-T1-87** and **V1-T1-88**).

All Type BR single-, two- and three-pole circuit breakers carry listing for HACR application. For circuit breakers with a shunt trip, add ST suffix.